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## ABSTRACT

When planning a library facility and estimating user seating space, the librarian must consider how many seats to provide and how much space is needed for each seat. In considering the number of seats, one must take into account the population served, collection size, and the kind of use made of the library. For example, at the State University of New York (SUNY)/Buffalo the allotted 6.25 square feet for each full-time equivalent student provides one seat for every four enrolled students, a workable ratio. The amount of space needed per seat depends on the kind of seating and the arrangement. At SUNY/Buffalo a table seat requires 20 square feet, an open carrel 25, and a lounge seat 30. Closed carrels and closed work spaces require larger spaces. (LS)

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## Estimating Space for Library Users

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Presented at the ALA Pre-Conference, JULY 16-17, 1976  
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Estimating seating space for users at SUNY/Buffalo has largely been an academic exercise for some time. Since there has never been enough space for seats, books or staff, we have always relied on fitting as many seats as possible into whatever areas were available. However, with the start of construction on an entirely new campus several years ago, we have had the opportunity to do some realistic planning for reader areas. Although the examples I will cite and the slides that I have to show you are mostly from my experiences in an academic library system, I believe that the information has relevance for most library settings.

I believe that estimating space for users in future libraries or libraries that are being remodeled poses two basic questions for the librarian. The first question is simply how many seats does the library wish to provide for its clientele. The second question is how much space should be provided for the number of seats desired. The first of these questions may be relatively difficult to answer while the second question is relatively easy. However since the total number of seats desired is necessary to determine how many square feet to allow for users, I would like to consider that question first.

Although there are a number of considerations when planning the number of seats in a library, some of the more important questions might be: what is the population to be served; what is the size of the collection; and most importantly, what is the type of use one might expect from the specific clientele using the library? How people use a library is not quite susceptible to formulas and square footage, but in the absence of other objective criteria, formulas do get used as a basis for seating requirements.

For an illustration, I would like to cite a few figures from the 1974 architectural issue of Library Journal. Two public library branches, both built in 1973, offer an interesting comparison. The first is a branch library building, housing 50,000 volumes, in Bloomington, Minnesota. Serving a population of 82,000, the library provides 100 seats, or one seat for every 820 potential users. In Flushing, N.Y., another branch library building, housing 40,000 volumes, contains again, 100 seats, but for a population of 24,000 users--one seat for every 240 potential users. Although it is true that Flushing, N.Y. and Bloomington, Minn. may differ

in many ways, both are serving sizable urban populations. The point to be considered though is that both libraries may have the ideal number of seats for the type of usage they receive, even though the Flushing library branch, per capita, has 3 1/2 times the seating.

Seating space in academic libraries, of course, poses considerations at an entirely different level. Since I am familiar with New York State and the State University system there, I would like to review how we plan seating space. All the guesswork or soul-searching about ratios of seats to books or seats to users has been eliminated by a standardization of space to be assigned--whether it be space for books, administration or, in our case, seating. Since SUNY/Buffalo is a University center (as opposed to a college, which has a different ratio), we are allotted 6.25 sq. ft. for each full time equivalent student on campus. As we will see a little later, when we consider square feet per seat, this works out to about one seat for every four students enrolled.

I did not mean to imply before that the adoption of a formula approach for the determination of seating space is inherently a bad approach. We have found our one to four ratio at Buffalo to be quite workable. It seems to be a compromise between some more conservative and some more liberal ratios I have seen elsewhere. The point of the illustration is that this ratio seems to work for us, given our type of student, the various levels of graduates and undergraduates we have, and the type of use our students make of the library. Surely, at exam times, we wish we had more seats in various library areas, but at slow times during the semester, a good many seats are unoccupied.

I find it difficult to attempt to summarize this section on the amount of seating that should be provided because I somehow feel it is unfair for me to tell you that the answer to the question of how many seats you should provide must be answered by you. This is the only honest answer, however. For those of you going from an old building to a new or expanded one, past usage trends will obviously be your best guide, coupling this information with any projections you have on the future user population of your library.

Another good approach that might be followed is to look at other building plans and critiques for libraries similar in size and clientele to your own. These will not only give you some fresh ideas about arrangement of seating areas, but if the critiques are good, may also give you a feeling

for the total number of seats you may need. In either case, the critiques will offer opinions tempered by hindsight, a commodity that any building planner appreciates.

As a warning from my own experience in dealing with constantly overcrowded library spaces, I would like to add the statement that it is easier to squeeze people than books. When your well designed and well proportioned library fills up with books, you may have little alternative than to replace seating spaces with bookstacks, which results in either fewer seats or more crowded seating areas. I have rarely seen a library which has reached what might be considered the age of adulthood that has too many seats.

It is perhaps a bit easier to decide how much space to allow for seating in your new library, now that you have decided how many seats to put in. You must decide on the proportions of different types of seating you need. For example, what percentage of the total seating will be table seating, what percentage carrels or lounge seating, and what percentage for any other specialized seating needs you may have.

I have taken the liberty of reproducing some drawings done by Mr. Francis Joseph McCarthy for an earlier Preconference organized by the Buildings and Equipment section of LAD. As you <sup>will</sup> see, Mr. McCarthy's drawings represent minimum clearances needed for people and equipment in reading areas. By using these minimum distances and laying out pieces of furniture, you will be able to generate a total number of square feet needed in your library for reader space. Mr. McCarthy's drawings do an excellent job of relaying the information of concern to him--that is, the minimum space necessary for people to utilize typical library reading room furniture. In designing your own library seating area, you can probably arrange your furniture in more interesting or novel arrangements, almost all of which will use up more space than the minimum distances cited by Mr. McCarthy.

A second possibility for estimating seating space in your library is to use standard square footage figures for each type of seating that you wish to have. For example, one might assign 30 sq. ft. for a lounge chair and 25 sq. ft. for a table seat in a reading area. After deciding how many total seats you wish to provide it is a simple matter to multiply the square footage factors by the number of each type of seat.

The square footage factors that can be used for various types of library furniture are open to some debate, but generally the amount of space provided is somewhat standard. I would again like to use New York State as an example. The New York State figures, while acceptable, would probably be considered minimal by many library planners. A table seat is allotted 20 sq. ft., an open carrel is allotted 25 sq. ft., and a lounge seat is allotted 30 sq. ft. Many space planning books would easily add 5 sq. ft. or more to each of these factors. I use them only as an illustration. I think it is more useful to give you some idea of what these figures mean in practice. The first slide you see is that of Lockwood Library, our main library unit at Buffalo. This reading room contains as you can see a combination of table and carrel seats in a totally unimaginative, unexciting, and unrecommended arrangement. The room is 35' x 90', a total of 3,150 sq. ft. There are 154 seats for an average of about 20 sq. ft. per station. Since the seating in this room is about half table and half carrel, I would estimate that the actual footage here is about 16-17 sq. ft. per table seat and 23-24 sq. ft. per carrel seat. As you might infer from the slide, the prime objective here was to fit as many seats as possible into this area. Despite what you may read about people not using every chair when chairs are too close together, I have personally seen this room filled to the point where people have been sitting on the floor. That is not an advertisement for cramming as many seats as possible into a small area; it is only a personal observation. (I should add here parenthetically that although I said a few minutes back that the New York State formula produces one seat for every four students, that formula applies only to new construction. Our present seating ratio on the old campus at Buffalo is about one seat for every 12+ students--and that ratio is achieved only through seating patterns like the one in this slide.)

The next slide is of a seating area in Lockwood Annex. I measured and counted this one twice, because I felt sure that I had made a mistake in calculating average square footage for the seats. This is an area of 726 sq. ft. with an incredible 66 seats, or just over ten sq. ft. per seat. I am not sure that it would be possible to use all of the seats in this area at one time. People must literally squeeze against the tables in order to let other people walk to their chairs. I have seen it almost filled,

however.

This slide is of a seating area in our Undergraduate Library, recently built in a temporary building due to faculty (not library) pressure on the University that there were no seats for undergraduate students. The seating space is surely not excessive, but is livable, and offers about 24-25 sq. ft. per station. Next, this lounge area, also in the Undergraduate Library, contains 30 lounge seats in 900 sq. ft., about 30 sq. ft. per station, the same allotment we would receive for lounge seating if a new library were being constructed. As you can see, this is a comfortable amount of space for this type of seating. Lounge areas, especially those in academic settings like an Undergraduate Library, must have sufficient space surrounding the furniture for people's feet and arms to hang out in the aisles. (All of these slides, by the way, were taken during an intersession period at the University, which accounts for the sparse attendance.)

This next slide is one of our Art History Library, now occupying an interim location on the new SUNY/Buffalo campus. You can see a combination of types of seating here. It is difficult to give a square footage figure for the types of seating <sup>shown</sup> ~~here~~, but I estimated approximately 30 sq. ft. per station. If you can afford the luxury of that much space per general seat, you will be able to do quite a few interesting arrangements of seating. My personal opinion is that an intermingling of types of seating, such as you see here, is usually quite desirable in general reading areas. Although you would be able to achieve a higher seating capacity by regular lines of tables or carrels, users will find diversified seating more of an attraction. It gives the appearance, if not the reality, of separation and privacy.

Lastly, I would like to touch on special seating you might want to consider at the time your library is being designed--seating that involves major architectural considerations rather than just purchased equipment. The concept of a closed carrel, or private study room, is one that is quite popular for some libraries. Here again, the amount of space that you wish to devote to this type of seating is dependent upon the luxury of space you have to offer. This slide shows a closed carrel in the Law Library. It contains only a desk-like work surface, a chair and a bookshelf, and is

self-lit. This closed carrel is only 35 sq. ft., about an absolute minimum for this type of seating. It is intended mainly for privacy, not really for extended research. If you are planning closed work spaces for faculty or distinguished visitors, the amount of space may range from about 50 sq. ft. for basic furniture to perhaps 100 or more feet for an actual office-like space. The Law Library carrels that you see in this slide are not lockable; they are available on a first-come, first-served basis, and are almost always filled. In our new buildings under construction, we have planned about 500 lockable carrels, similar to these. Almost all of these will be assigned on a semester or annual basis to upper-level graduate students or faculty working on dissertations or research. Since these carrels will be lockable, users will be able to leave personal belongings such as papers, typewriters, calculators, etc. in the carrel at all times. Although quite a few users believe that this type of carrel arrangement provides an ideal arrangement for study, it is quite an investment for the library. Not only does it take up more floor space than traditional seating, but it also ties up that space for only one user, whether he is in the library or not. If the occupant of a closed carrel uses that space 15-20% of the time the library is open, that is quite a bit. The other 80% of the time you are open, the space is empty and unusable.

As I close this presentation, I would like to encourage you to think of seating as an integral part of your library design, rather than an empty space to be filled with furniture. I think some of our most successful seating, in terms of popularity, is that which takes up actually little space or, more importantly, space that would have been unusable if no one had planned ahead for it. This balcony, overlooking the lobby of the Law Library, is an incredibly popular study area, created by a step-like configuration of the floor and a continuous carrel surface. We merely covered the whole arrangement with carpeting and ended up with about 90 "free" seats, which take up almost no floor space and don't even require chairs. Absolutely no one worries about sitting on a rug where someone may have walked a few minutes earlier.

In the new Undergraduate Library under construction, a seating area was created under a stairwell by free form concrete, again covered with carpeting. I am sure this will turn out to be one of the most popular



seating areas in the building. Also under construction in the Undergraduate Library is a two level seating area, which takes advantage of a two floor opening. While the construction of this platform surely added to the cost of the building, it did allow us to gain about 25 extra seats without using any net square footage of floor space. Not only is it a bonus in terms of square footage, but it will be an interesting and different place for undergraduates to sit. Our non-traditional seating, such as this, always seems to "sell" better than tables and chairs, whether it is for freshmen undergraduates or Law students.

Since we all can't build libraries from scratch, even when we need them, I have distributed some guidelines for general seating areas and common library furniture. It is a listing of square footages which might be assigned for various pieces of furniture or seating types.

Also, the ALA offices can provide you with floorplans of various libraries recently constructed. If you are not entirely comfortable with blueprints and plans, your most productive approach to planning would be to visit a number of libraries of all types in your area and survey the seating areas. You will quickly get a feel for what a three foot aisle or a four foot aisle looks like between seats, and in what situations such distances are necessary.

Thank you for your attention. If you have either specific questions or general considerations you might wish to discuss, please bring them up during the question and answer session or feel free to contact me at any time during the Preconference..

Square Footage for Various Types of Library  
Reader Stations

Table seating: Minimum 20 sq. ft. per seat

Liberal 30-35 sq. ft. per seat

Table seating allowances are also dependent upon the type and size of table selected. Tables for fewer people (e.g. 2 person, 4 person, or even individual tables) will take up more space per capita in reading areas than tables seating more people.

Round tables, although they may not take up any more floor space than square or rectangular tables, decrease the amount of table surface available to users.

Carrel seating: Minimum 25 sq. ft. per carrel  
(open carrel)

Liberal 35-40 sq. ft. per carrel

Carrels intended to be used for special purpose or to house special equipment should be considered separately. For example, some carrels built for microform reading equipment are necessarily larger to hold A-V equipment and provide writing space alongside the machines. Oversize carrels might also profitably be used in areas where manuscript materials or large volumes are being compared side by side (e.g. Art materials)

Carrel seating: Minimum 35 sq. ft. per carrel  
(closed carrel)

Liberal 80-100 or more sq. ft.

This type of seating may provide only the absolute necessities for study purposes (desk surface, chair, bookshelf) or may truly be an office within the library for distinguished users.

Lounge seating: Minimum 25-30 sq. ft. per seat

Liberal--Depends upon furniture selected

Lounge seating is truly difficult to measure because of the wide variety in styles and sizes. Obviously, three-seater sofas will use less space per seat than individual lounge chairs. Also, some styles of lounge furniture are basically larger than others. For example, large foam rubber cube form chairs will take up more floor space than traditional lounge seating, but may accommodate more than one user at a time.